<u>SB-3005</u> Submitted on: 1/30/2022 10:53:37 AM Testimony for AEN on 2/2/2022 1:00:00 PM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Shannon Rudolph	Individual	Support	No

Comments:

Support

Testimony Presented Before the
Senate Committee on Agriculture and the Environment
Wednesday, February 2, 2022 at 1:00 p.m.
By
Nicholas Comerford, Dean
College of Tropical Agriculture and Human Resources
And
Michael Bruno, PhD
Provost
University of Hawai'i at Mānoa

SB 3005 - RELATING TO SUSTAINABLE AGRICULTURE

Chair Gabbard, Vice-Chair Nishihara, and members of the Senate Committee on Agriculture and Environment:

Thank you for this opportunity to provide testimony in support of the intent of SB 3005 on establishing a cover crop reimbursement program to be administered by the Hawai'i Department of Agriculture (HDOA). This bill could be combined with SB 2990 as they have the same objective but different levels of detail.

Our comments below are similar to those provided for SB2990:

Soil health and agriculture sustainability has been shown to be dependent on protecting, maintaining and increasing soil organic matter. Cover cropping is one tool that has shown to be effective in building soil organic matter which results in maintaining soil stability during a fallow period, increasing soil water retention capacity, increasing soil nutrient retention and release capacity, and enhancing soil microorganism biodiversity. Cover cropping can be a tool in a cropping system that has value during a fallow period or can also be an intra-rotation crop with its own economic value.

This bill establishes a three-year pilot program to reimburse producers for some of the costs of cover cropping run by HDOA. We recommend the following concept be added to the purpose of the pilot program: For producers to evaluate the economic cost-benefit of cover cropping to prepare for the time when subsidies end. Further, that producers use this pilot program to evaluate profit producing cover crop opportunities; as it would add to the post-subsidy and economic viability of cover cropping that will be necessary in the long-run.

The University of Hawai'i supports the intent and language of SB 3005 and have provided comments on additional language. We suggest that this bill be combined with SB 2990 which has the same intent. We defer to HDOA as to whether the amount of temporary staff and subsidy funding is sufficient to allow the department to meet the stated goals.

Submitted on: 1/31/2022 2:50:49 PM

Testimony for AEN on 2/2/2022 1:00:00 PM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Tabatha Aiko Knudson	Individual	Support	No

Comments:

I strongly support this bill! We must prioritize the sustainability and well being of our crops, soil and environment, and this bill will be extremely helpful in doing so!

<u>SB-3005</u> Submitted on: 1/31/2022 3:16:28 PM Testimony for AEN on 2/2/2022 1:00:00 PM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
April Petersom	Individual	Support	No

Comments:

I fully support SB3005,

Mahalo's

April Peterson

<u>SB-3005</u> Submitted on: 1/31/2022 3:55:39 PM Testimony for AEN on 2/2/2022 1:00:00 PM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Maureen Datta	Testifying for Adaptations Inc	Support	No

Comments:

Please support this essential component to building healthy soil.

<u>SB-3005</u> Submitted on: 1/31/2022 5:10:28 PM

Testimony for AEN on 2/2/2022 1:00:00 PM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Valerie Weiss	Individual	Support	No

Comments:

I strongly support this bill which will help protect the land and helps farmers.

Submitted on: 1/31/2022 5:13:00 PM

Testimony for AEN on 2/2/2022 1:00:00 PM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
pamela burrell	Individual	Support	No

Comments:

Aloha Senators,

It is long overdue to support proper farming methods that easily create resorative soils. aiding in water retention, erosion benifitting not only the envirionment but making it easy for a farmer to do a proper planting. Building the soil will produce more nutricious food and rely on less purchased fertalizers. It's a win-win.

Thank you for concidering healthy soils for our islands. The benifits are many..including reducing carbon emmissions.

Pamela Burrell

Kalihiwai, Kaua'i

<u>SB-3005</u> Submitted on: 1/31/2022 6:03:49 PM Testimony for AEN on 2/2/2022 1:00:00 PM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Rodger Hansen	Individual	Support	No

Comments:

I am a registered voter in Hakalau HI 96710. Please support this bill. Mahalo

<u>SB-3005</u> Submitted on: 1/31/2022 6:57:09 PM Testimony for AEN on 2/2/2022 1:00:00 PM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Ken Stover	Individual	Support	No

Comments:

cover crops are essential for remediating the soil.

<u>SB-3005</u> Submitted on: 1/31/2022 6:57:09 PM Testimony for AEN on 2/2/2022 1:00:00 PM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Will Caron	Individual	Support	No

Comments:

I support this bill! Mahalo!

<u>SB-3005</u> Submitted on: 1/31/2022 10:49:13 PM

Testimony for AEN on 2/2/2022 1:00:00 PM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Robert Bence	Individual	Support	No

Comments:

Aloha suport Cover Crops they are imperative for sustainable farming seen major benfits on the farm mahalo



P.O. Box 253, Kunia, Hawai'i 96759 Phone: (808) 848-2074; Fax: (808) 848-1921 e-mail info@hfbf.org; www.hfbf.org

FEBRUARY 2, 2022

HEARING BEFORE THE SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT

TESTIMONY ON SB 3005 RELATING TO SUSTAINABLE AGRICULTURE

Conference Room 224 & Videoconference 1:00 PM

Aloha Chair Gabbard, Vice-Chair Nishihara, and Members of the Committee:

I am Brian Miyamoto, Executive Director of the Hawaii Farm Bureau (HFB). Organized since 1948, the HFB is comprised of 1,800 farm family members statewide and serves as Hawaii's voice of agriculture to protect, advocate and advance the social, economic, and educational interests of our diverse agricultural community.

The Hawaii Farm Bureau supports SB 3005, which establishes a cover crop reimbursement pilot program to provide reimbursement to farming operations in the State for costs related to cover cropping and creates a cover crop reimbursement pilot program manager position within the HDOA to administer the program.

HFB agrees that the use of cover crops increases agricultural productivity and is a beneficial management practice. We strongly support the concept of building soil structure and nutrient capacity. Caring for the soil is a cornerstone to having multigenerational farms that continue to provide for the people of Hawaii.

Farming is a tough business. High production costs are a major driver of narrow profit margins for Hawaii's farmers. Land, water, labor, taxes, transportation, utilities, inputs, invasive species, and food safety regulations are all costs of doing business that often results in our farmers just being able to break even. HFB supports this initiative that could reduce the cost of production for local farmers by incentivizing cover cropping. This is another mechanism that can help locally produced goods compete with imported products, strengthening our local economy.

Thank you for this opportunity to testify on this important subject.

DAVID Y. IGE

EMPLOYEES' RETIREMENT SYSTEM
HAWAI'I EMPLOYER-UNION HEALTH BENEFITS TRUST FUND

OFFICE OF THE PUBLIC DEFENDER



STATE OF HAWAI'I
DEPARTMENT OF BUDGET AND FINANCE

P.O. BOX 150 HONOLULU. HAWAI'I 96810-0150 CRAIG K. HIRAI

GLORIA CHANG DEPUTY DIRECTOR

ADMINISTRATIVE AND RESEARCH OFFICE BUDGET, PROGRAM PLANNING AND MANAGEMENT DIVISION FINANCIAL ADMINISTRATION DIVISION OFFICE OF FEDERAL AWARDS MANAGEMENT (OFAM)

WRITTEN ONLY

TESTIMONY BY CRAIG K. HIRAI
DIRECTOR, DEPARTMENT OF BUDGET AND FINANCE
TO THE SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT
ON
SENATE BILL NO. 3005

February 2, 2022 1:00 p.m. Room 224 and Videoconference

RELATING TO SUSTAINABLE AGRICULTURE

The Department of Budget and Finance (B&F) offers comments on this bill.

Senate Bill No. 3005 requires the Department of Agriculture (DOA) to establish and implement a three-year cover crop reimbursement pilot program to reimburse farming operations for the costs of cover cropping; establish the 1.00 exempt temporary pilot program manager position that may receive a salary not to exceed \$50,000 annually; and requires the DOA to submit interim reports to the Legislature. This bill also appropriates an undetermined amount of general funds in FY 23 to effectuate the program, provided that up to \$20,000 may be used for the program's administrative costs.

B&F also notes that the federal Coronavirus Response and Relief Supplemental Appropriations Act requires that states receiving Elementary and Secondary School Emergency Relief (ESSER) II funds and Governor's Emergency Education Relief II funds must maintain state support for:

- Elementary and secondary education in FY 22 at least at the proportional level of the state's support for elementary and secondary education relative to the state's overall spending, averaged over FYs 17, 18 and 19; and
- Higher education in FY 22 at least at the proportional level of the state's support for higher education relative to the state's overall spending, averaged over FYs 17, 18 and 19.

Further, the federal American Rescue Plan (ARP) Act requires that states receiving ARP ESSER funds must maintain state support for:

- Elementary and secondary education in FY 22 and FY 23 at least at the proportional level of the state's support for elementary and secondary education relative to the state's overall spending, averaged over FYs 17, 18 and 19; and
- Higher education in FY 22 and FY 23 at least at the proportional level of the state's support for higher education relative to the state's overall spending, averaged over FYs 17, 18 and 19.

The U.S. Department of Education has issued rules governing how these maintenance of effort (MOE) requirements are to be administered. B&F will be working with the money committees of the Legislature to ensure that the State of Hawai'i complies with these ESSER MOE requirements.

Thank you for your consideration of our comments.

Submitted on: 2/1/2022 9:19:10 AM

Testimony for AEN on 2/2/2022 1:00:00 PM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Ashley Lee	Individual	Support	No

Comments:

Cover crops improve water quality, soil health, and build resiliency in the face of climate change. They are one of the most common, accessible agricultural strategies for improving soil health and water retention. They also prevent nitrogen pollution in water and erosion to the benefit of both the environment and the farmer.

Cover crops are considered a Best Management Practice (BMP) widely used in agriculture for nutrient loss reduction and soil conservation.

Cover crops are crucial to the nutrient cycle and the development of fertile soil. Because of this trait and how they're used to manage a range of soil <u>macronutrients</u> and <u>micronutrients</u>[3], they are sometimes referred to as "green <u>manure</u>". Of the various nutrients, the impact that cover crops have on nitrogen management has received the most attention from researchers and farmers because nitrogen is often the most limiting nutrient in crop production.

In the same way that allelopathic properties of cover crops can suppress weeds, they can also break disease cycles and reduce populations of bacterial and fungal diseases and parasitic nematodes. For example, species such as mustards have been shown to suppress fungal disease through the release of naturally occurring toxic chemicals. Similarly, some cover crops are used as so-called "trap crops" to attract pests away from the crop of value and intentionally toward the cover crop.

The many benefits of cover crops include:

- Growing our agriculture sector through cover crop seed production
- Supporting sustainable farming practices and healthy soil
- Remediating depleted soil from industrial farming systems
- Building organic matter (soil quality) and improving soil fertility (nutrients)
- Reducing the need for synthetic fertilizers and saving farmers' money in inputs
- Supporting native species and biodiversity
- Increasing water infiltration and water retention
- Suppressing weeds, resulting in less herbicide use
- Providing disease and pest management
- Reducing wind and water erosion and conserving top soil
- Preventing runoff from impacting sensitive environments, water sources, nearshore reefs, and fisheries

Similar cover crop reimbursement programs have been successfully implemented in other state and work to incentivize cover crop planting and growth.			

Submitted on: 2/1/2022 9:25:53 AM

Testimony for AEN on 2/2/2022 1:00:00 PM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Reba Lopez	Individual	Support	No

Comments:

As president of the Haleakala Chapter of the Hawaii Farmers Union United, and a family farmer at Birds with Arms Farms, I would like to testify in support of this bill. Mahalo.

Submitted on: 2/1/2022 10:24:15 AM

Testimony for AEN on 2/2/2022 1:00:00 PM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Michal Stover	Individual	Support	No

Comments:

I support SB3005 because cover crops improve water quality, soil health, and build resiliency in the face of climate change. They are one of the most common, accessible agricultural strategies for improving soil health and water retention. They also prevent nitrogen pollution in water and erosion to the benefit of both the environment and the farmer.



COMMITTEE ON AGRICULTURE AND ENVIRONMENT Senator Mike Gabbard, Chair Senator Clarence K. Nishihara, Vice Chair

SB3002

RELATING TO SUSTAINABLE AGRICULTURE

Wednesday, February 2, 2022, 1:00 PM VIA VIDEOCONFERENCE

Chair Gabbard, Vice Chair Nishihara, and Members of the Committee,

The Hawaii Cattlemen's Council (HCC) is the Statewide umbrella organization comprised of the five county level Cattlemen's Associations. Our member ranchers represent over 60,000 head of beef cows; more than 75% of all the beef cows in the State. Ranchers are the stewards of over 750 thousand acres of land in Hawaii, or 20% of the State's total land mass. We represent the interests of Hawaii's cattle producers.

The Hawaii Cattlemen's Council <u>supports SB3005</u> to establish a three-year cover crop reimbursement pilot program to provide reimbursement to farming operations in the State for costs related to cover cropping.

Agricultural lands have the ability to benefit the environment while feeding the community. Hawaii's ranchers are always looking for ways to ensure that the health of the land is prioritized, as stewarding the land is paramount in ensuring their operations can remain productive for future generations. Any assistance to help with increasing soil quality, sequestering carbon, and preventing erosion is welcome. As Hawaii Island ranchers combat the Twolined Spittlebug and Maui Nui ranchers contend with invasive deer, cover crops will continue to be an important tool to cover any bare soil caused by these invasive species.

We appreciate the opportunity to testify on this measure.

Nicole Galase Hawaii Cattlemen's Council Managing Director









Submitted on: 2/1/2022 1:06:03 PM

Testimony for AEN on 2/2/2022 1:00:00 PM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Dave Mulinix	Testifying for Our Revolution Hawaii	Support	No

Comments:

Aloha Committee,

On behalf of Our Revolution Hawaii's 5,000 members and supporters we stand in support of SD3005 that will increase and support essential sustainable agriculture in Hawaii.

Mahalo for your kind attention,

Dave Mulinix, Organizer

Our Revolution Hawaii

DAVID Y. IGE Governor

JOSH GREEN Lt. Governor



PHYLLIS SHIMABUKURO-GEISER Chairperson, Board of Agriculture

MORRIS M. ATTA
Deputy to the Chairperson

State of Hawaii **DEPARTMENT OF AGRICULTURE**

1428 South King Street Honolulu, Hawaii 96814-2512 Phone: (808) 973-9600 FAX: (808) 973-9613

TESTIMONY OF PHYLLIS SHIMABUKURO-GEISER CHAIRPERSON, BOARD OF AGRICULTURE

BEFORE THE SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT

WEDNESDAY, FEBRUARY 2, 2022 1:00 P.M. VIA VIDEOCONFERENCE

SENATE BILL NO. 3005 RELATING TO SUSTAINABLE_AGRICULTURE

Chairperson Gabbard, and Members of the Committee:

Thank you for the opportunity to testify on Senate Bill No. 3005. The bill requires the Department to establish a three-year cover crop reimbursement pilot program to reimburse farming operations in the State for the costs of acquiring cover crop seeds, green manure or compost.

The Department supports the intent of the bill, emphasizing the advantages cover crop systems may have to increase soil health and agricultural productivity in the State. The Department also offered comments to a similar measure, SB2990. The Department prefers SB3005, which provides more information on the reimbursement formula. The Department also has concerns that there may be unwanted disadvantages of using cover crops, such as potential increase in the presence of insect pests or plant diseases that may adversely impact crops following cover crops if the cover crop species list is not thoroughly evaluated. The Department offers assistance to collaborate with UH CTAHR researchers and Cooperative Extension Specialists in this matter. Some cover crops may also exhibit allelopathic interactions with other crops, releasing biochemicals with potentially harmful effects to successive crops. Poorly or incompletely managed cover crops can behave like noxious weeds, if left unchecked. In addition,



most cover crops commonly recommended and used in the State are not native to Hawaii and some may be susceptible to the new invasive pasture pest, the Two Lined Spittle Bug.

Thank you for the opportunity to submit testimony.



Senate Committee on Agriculture and Environment Hawai'i Alliance for Progressive Action (HAPA) <u>Supports</u>: SB3005

Wednesday, February 2nd, 2022 1:00 p.m. Conference Room 224

Aloha Chair Gabbard, Vice Chair Nishihara and Members of the Committee,

HAPA strongly supports SB3005, relating to sustainable agriculture, which would establish a three-year cover crop reimbursement pilot program to provide reimbursement to farming operations in the State for costs related to cover cropping.

HAPA believes that SB3005 is part of the solution to establishing a sustainable, profitable and regenerative agriculture system for Hawai'i while improving our land management practices for the better.

SB3005 will help encourage the use of cover crops which create closed loop systems and eliminate the cost of synthetic inputs while recycling, and even fixing, nutrients within the soil. Good healthy soil is one of the important factors to increase local food production and support regenerative farming practices.

Cover crops improve water quality, soil health, and build resiliency in the face of climate change. They are one of the most common, accessible agricultural strategies for improving soil health and water retention and preventing nitrogen pollution in water and erosion—to the benefit of both the environment and the farmer [1].

Covered crops are considered a Best Management Practice (BMP) widely used in agriculture for nutrient loss reduction and soil conservation [2].

Cover crops are crucial to the nutrient cycle and the development of fertile soil and because of this trait are sometimes referred to as "green manure." This is because cover crops are used to manage a range of soil macronutrients and micronutrients [3]. Of the various nutrients, the impact that cover crops have on nitrogen management has received the most attention from researchers and farmers, because nitrogen is often the most limiting nutrient in crop production [4].

In the same way that allelopathic properties of cover crops can suppress weeds, they can also break disease cycles and reduce populations of bacterial and fungal diseases and parasitic nematodes. For example, species such as mustards, have been shown to suppress fungal disease through the release of naturally occurring toxic chemicals. Similarly, some cover crops are used as so-called "trap crops", to attract pests away from the crop of value and intentionally toward the cover crop.

The many benefits of cover crops include that they:

- Grow our agriculture sector through cover crop seed production;
- Support sustainable farming practices and healthy soil;
- Remediate depleted soil from industrial farming systems;
- Build organic matter (soil quality) and improve soil fertility (nutrients);
- Reduce the need for synthetic fertilizers and save farmers money in inputs;
- Support native species and biodiversity;
- Increase water infiltration and water retention;
- Suppress weeds resulting in less herbicide use;
- Provide disease and pest management;
- Reduce wind and water erosion and conserves top soil; and
- Prevent runoff from impacting sensitive environments, water sources, nearshore reefs and fisheries.

Similar cover crop reimbursement programs to SB3005 have been successfully implemented in other states and work to incentivise cover crop planting and growth^[1,2].

HAPA strongly supports SB3005 and believes it is part of the solution to growing our local food production and economy and a more regenerative agricultural system for Hawai'i.

Thank you for your consideration.

Respectfully,

Anne Frederick
Executive Director

[1] Civil Eats: Held, Lisa (2020) Two States are Leading a Cover Crop Revival https://civileats.com/2020/02/11/two-states-are-leading-a-cover-crop-revival/ [2] NASDA (2019) Innovative State-Led Efforts to Finance Agricultural Conservation,

https://s3.amazonaws.com/nasda2/media/innovative-state-led-efforts-finance-agricultural-conservation.pdf [3] USDA Natural Resource Conservation Service; Healthy Soils: Are Covered All The Time

https://nrcspad.sc.egov.usda.gov/distributionCenter/pdf.aspx?productID=1026

[4] The New York Times: Strom, Stephanie (2016) Cover Crops, a Farming Revolution with Deep Roots in the Past https://www.nytimes.com/2016/02/07/business/cover-crops-a-farming-revolution-with-deep-roots-in-the-past.html?_r=0



Officers

Vincent Mina State President HFUU

Anabella Bruch Vice-President HFUU

Maureen Datta Secretary HFUU

Reba Lopez HFUU Treasurer

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Dash Kuhr Kohala, Hawai'i

Drake Weinert, East Hawai'i

> Steve Lund Puna, Hawai'i

Andrea Drayer K'au, Hawaii

Maureen Datta Kona, Hawai'i

Robert Boudreaux Hana, Maui

Reba Lopez Haleakala, Maui

Bobby Pahia Mauna Kahalawai, Maui

> Kaipo Kekona Lahaina, Mau

Brynn Foster North Shore. Oahu

Christian Zuckerman Wai'anae, Oahu

Vincent Kimura Waimanalo, Oahu

Anabella Bruch Kauai Aloha Chair Gabbard, Vice Chair Nishihara, and Members of the Committee on Agriculture and Environment,

The Hawaii Farmers Union United (HFUU) is a 501(c)(5) agricultural advocacy nonprofit representing a network of over 2,500 family farmers and their supporters across the Hawaiian islands. **HFUU strongly supports SB3005 to incentivize cover crop adoption.**

Ulike SB2990 which would provide cover crop seed cost share. **SB3005 establishes a cover crop program that reimburses by acreage**, following the mechanism employed by the USDA NRCS and multiple other states. Furthermore, SB3005 directs the HDOA to allocate funding reflecting the distribution of farm sizes across the state in a manner that will aid farm equity in access to state subsidies.

HFUU supports this program as means to support small and family farmers as well as any producer seeking to support their soil health.

Mahalo for the opportunity to testify.

Vincent Mina President HFUU/HFUF



<u>SB-3005</u> Submitted on: 2/1/2022 2:06:44 PM

Testimony for AEN on 2/2/2022 1:00:00 PM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
	Testifying for We Are One, Inc www.WeAreOne.cc - WAO		No

Comments:

Strongly Support SB3005 Cover Crops

www.WeAreOne.cc

Submitted on: 2/1/2022 2:11:16 PM

Testimony for AEN on 2/2/2022 1:00:00 PM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Nanea Lo	Individual	Support	No

Comments:

Hello,

My name is Nanea Lo. I come from Papakōlea, Oʻahu. I'm a Kanaka Maoli born and raised in the Hawaiian Kingdom. I'm writing in full support of SB3005.

Establishes a three-year cover crop reimbursement pilot program to provide reimbursement to farming operations in the State for costs related to cover cropping. Establishes a cover crop reimbursement pilot program manager position within the department of agriculture to administer the program. Requires an annual report to the legislature. Appropriates funds to this.

Support SB3005.

me ke aloha 'āina,

Nanea Lo

Submitted on: 2/1/2022 7:49:05 PM

Testimony for AEN on 2/2/2022 1:00:00 PM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Barbara Barry	Individual	Support	No

Comments:

Aloha,

I support the use of cover crops.

There are NO downsides to it!

They protect, nourish and enhance soil when tilled under.

Mahalo,

Ms. Barbara Barry

Submitted on: 2/2/2022 6:51:21 AM

Testimony for AEN on 2/2/2022 1:00:00 PM

Submitted By	Organization	Testifier Position	Requested Requested
Chelle Galarza	Individual	Support	No

Comments:

I support this bill. Cover crops improve water quality, soil health, and build resiliency in the face of climate change. They are one of the most common, accessible agricultural strategies for improving soil health and water retention. They also prevent nitrogen pollution in water and erosion to the benefit of both the environment and the farmer.